



BRETT MEEKER

# DYSPROSIUM

Element Symbol: **Dy**

Atomic Number: **66**

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Dysprosium is a rare earth element that has a metallic, bright silver luster. Dysprosium is never encountered as a free element, but is found in many minerals, including xenotime and monazite and often with erbium and holmium or other rare earth elements.

Dysprosium was first identified in 1886 by Paul Émile Lecoq de Boisbaudran in Paris, but it was not isolated in pure form until the development of ion exchange techniques in the 1950s. Its name is derived from the Greek dysprositos meaning “hard to get” due to the difficulty of purifying it.

Dysprosium is used for its high thermal neutron absorption cross-section in making control rods in nuclear reactors, for its high magnetic susceptibility to magnetization in data storage devices and the as well as in laser systems and lighting. It is most commonly used as in neodymium-iron-boron high strength permanent magnets which are used in the drive motors for hybrid electric vehicles.

All the rare earth elements occur in good commercial quantities in Australia, but China currently dominates in the supply of these technologically important elements which are typically sold as metal (for magnets) the oxide, alloys and the chloride and fluoride.

*Provided by the element sponsor Gary Bowman*

## ARTISTS DESCRIPTION

“Dy 66” is a polymer plate etching. The image is a collage of figures on a background of elemental-mined Dysprosium.

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